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Southeast
Fisheries
Science Center

Sea Turtle Stranding and Salvage Network (STSSN)

SEFSC Protected Species Program Review



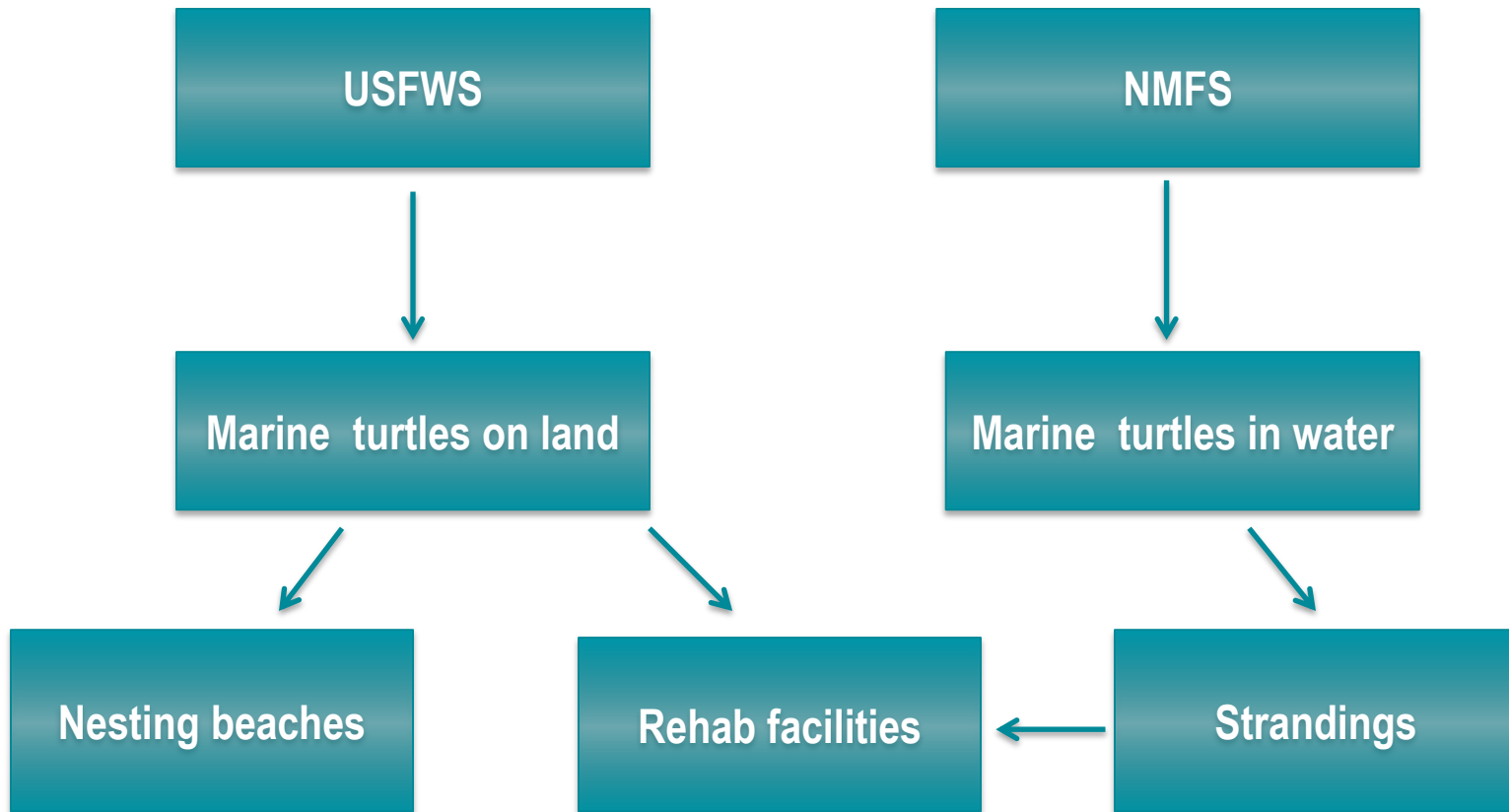
27 August 2015
Miami, Florida

Sea Turtle Stranding and Salvage Network

- Established in 1980
- Covers 18 coastal states from Texas through Maine, Puerto Rico and USVI
- The STSSN is a volunteer network and search / documentation effort varies temporally and spatially within and between states.
- Stranding data are collected within individual states and are proprietary at the state level.



Endangered Species Act



STSSN Stranding Report Form

A standardized stranding report is completed for each animal documented – this includes date, species, location, condition, disposition, measurements, tag information and notation of any observed anomalies.

SEA TURTLE STRANDING AND SALVAGE NETWORK – STRANDING REPORT

OBSERVER'S NAME / ADDRESS / PHONE:

First _____ M.I. _____ Last _____
 Affiliation _____
 Address _____
 Area code/Phone number _____

STRANDING DATE:

Year 20__ Month __ Day __
 Turtle number by day __

State coordinator must be notified within 24 hrs;
 this was done by ☐ phone (999)999-9999
☐ email ☐ fax (999)999-9999

SPECIES: (check one)

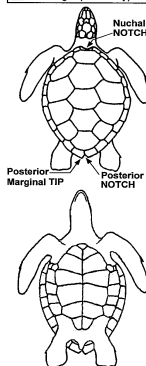
- ☐ CC = Loggerhead
☐ CM = Green
☐ DC = Leatherback
☐ EI = Hawksbill
☐ LK = Kemp's Ridley
☐ LO = Olive Ridley
☐ UN = Unidentified

Check Unidentified if not positive. Do Not Guess.

Carcass necropsied? ☐ Yes ☐ No
 Photos taken? ☐ Yes ☐ No
 Species verified by state coordinator? ☐ Yes ☐ No

SEX:

- ☐ Undetermined
☐ Female ☐ Male
 Does tail extend beyond carapace?
☐ Yes; how far? _____ cm / in
☐ No
 How was sex determined?
☐ Necropsy
☐ Tail length (adult only)



STRANDING LOCATION:

☐ Offshore (Atlantic or Gulf beach) ☐ Inshore (bay, river, sound, inlet, etc)

State _____ County _____

Descriptive location (be specific) _____

Latitude _____ Longitude _____

CONDITION: (check one)

- ☐ 0 = Alive
☐ 1 = Fresh dead
☐ 2 = Moderately decomposed
☐ 3 = Severely decomposed
☐ 4 = Dried carcass
☐ 5 = Skeleton, bones only

FINAL DISPOSITION: (check)

- ☐ 1 = Left on beach where found; painted? ☐ Yes* ☐ No(5)
☐ 2 = Buried: ☐ on beach / ☐ off beach;
 carcass painted before buried? ☐ Yes* ☐ No
☐ 3 = Salvaged: ☐ all / ☐ part(s), what/why?

- ☐ 4 = Pulled up on beach/dune; painted? ☐ Yes* ☐ No
☐ 5 = Alive, released
☐ 7 = Alive, taken to rehab. facility, where?

- ☐ 8 = Left floating, not recovered; painted? ☐ Yes* ☐ No
☐ 9 = Disposition unknown, explain

*If painted, what color?

CARAPACE MEASUREMENTS: (see drawing)

Using calipers

Straight length (NOTCH-TIP) _____ cm / in
 Minimum length (NOTCH-NOTCH) _____ cm / in
 Straight width (Widest Point) _____ cm / in

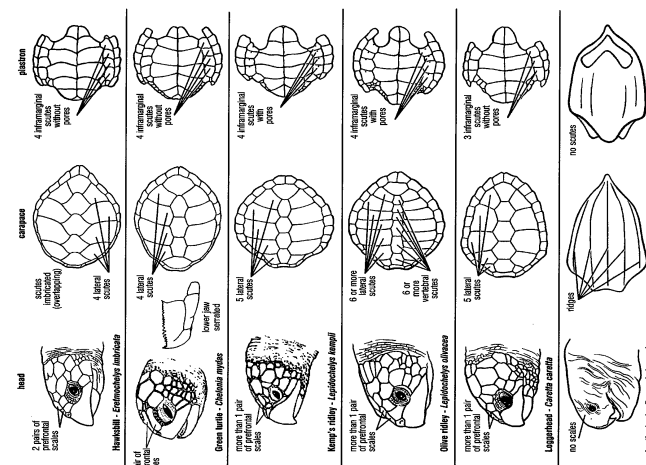
Using non-metal measuring tape

Curved length (NOTCH-TIP) _____ cm / in
 Minimum length (NOTCH-NOTCH) _____ cm / in
 Curved width (Widest Point) _____ cm / in

Weight ☐ actual / ☐ est. _____ kg / lb

Mark wounds / abnormalities on diagrams at left and describe below (note tar or oil, gear or debris entanglement, propeller damage, epibiota, papillomas, emaciation, etc.). Please note if no wounds / abnormalities are found.

SPECIES IDENTIFICATION



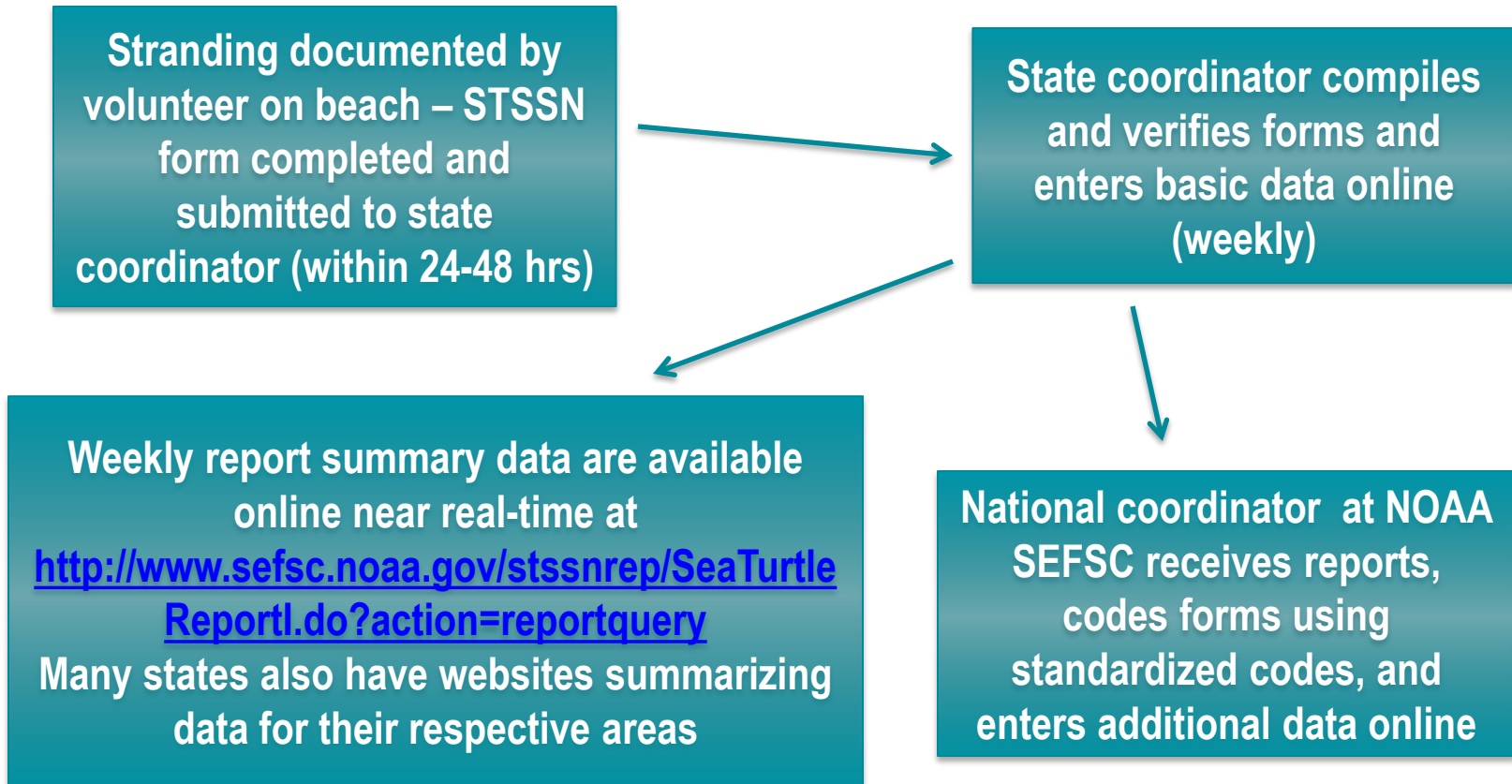
Please use an envelope and mail original form to:

Local Stranding Coordinator's Name
 Affiliation
 Mailing Address
 City, State, Country, Postal Code



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STSSN Data Flow

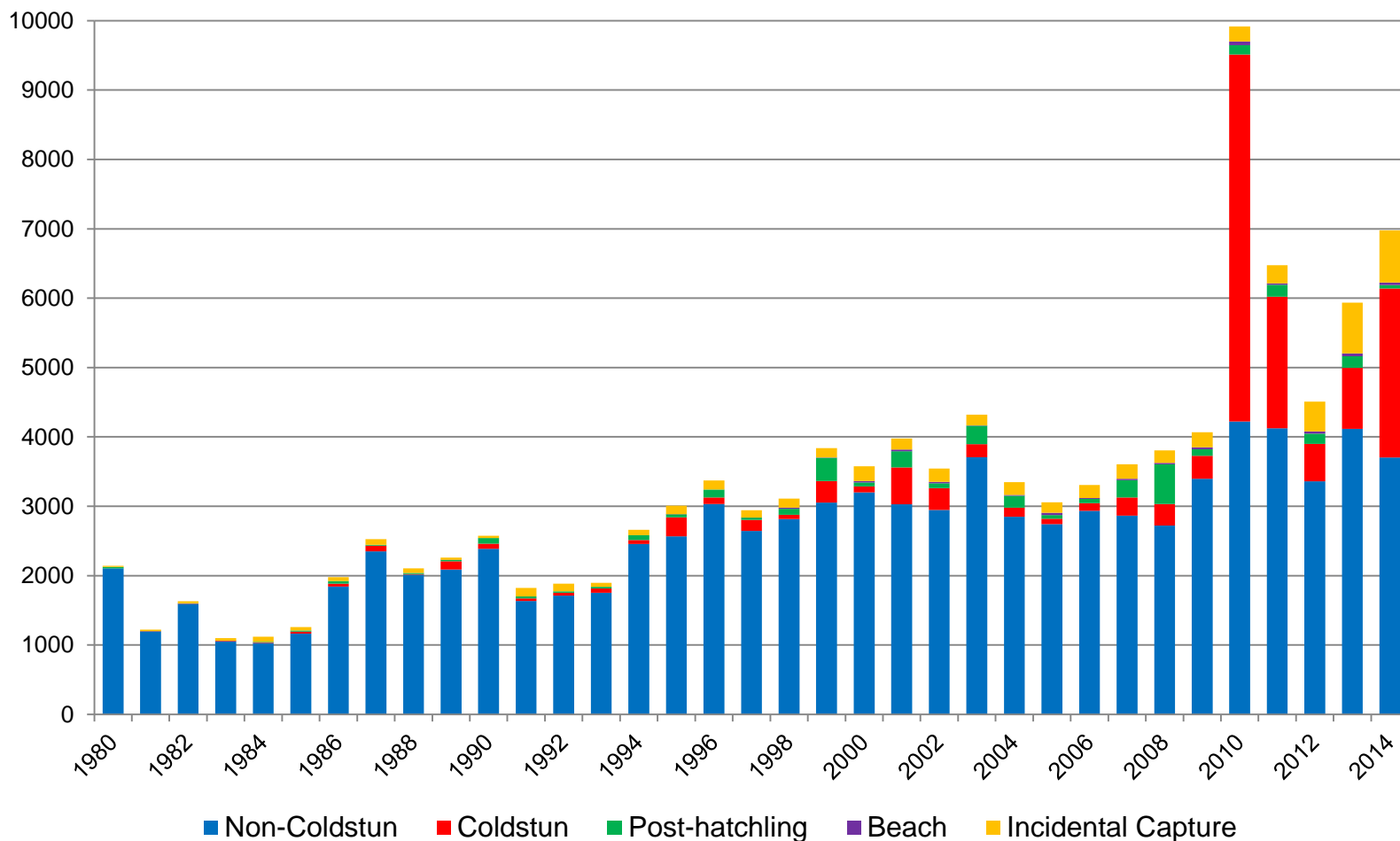


A stranding is defined as a turtle that washes ashore or is found floating (dead or alive, generally in a weakened condition).

- 5 report types in STSSN database
 - Strandings
 - Cold-stuns
 - Post-hatchlings
 - Incidental captures
 - Beach events
- Stranding numbers represent only a fraction of total mortality since not all turtles wash ashore or are reported.

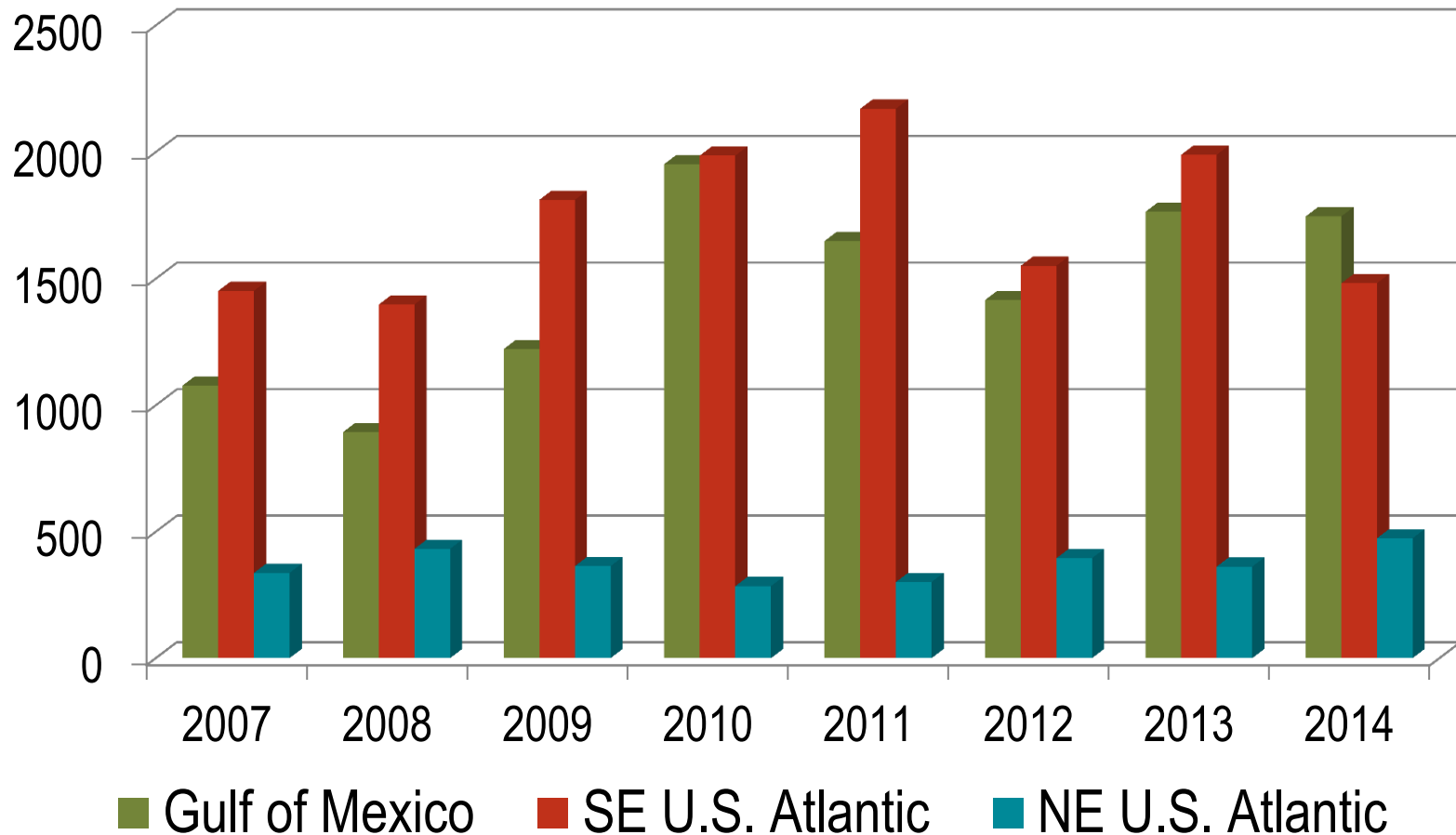


STSSN Database Records by Report Type



Regional Stranding Totals

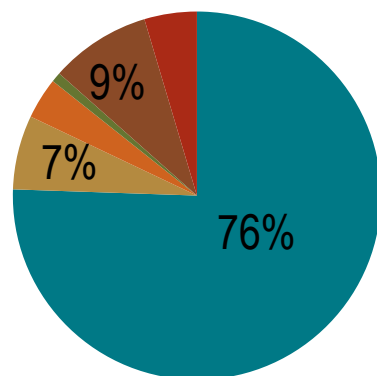
excluding cold-stuns and post-hatchlings



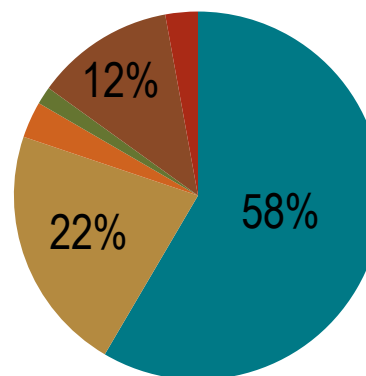
Stranding Species Composition

excluding cold-stuns and post-hatchlings

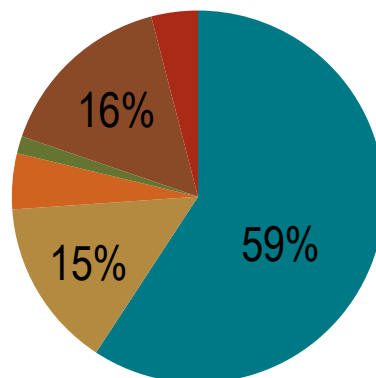
1980-1989



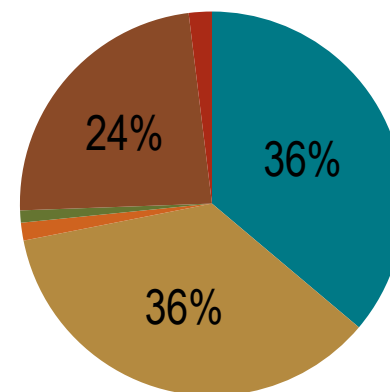
2000-2009



1990-1999



2010-2014



■ CC ■ CM ■ DC ■ EI ■ LK ■ UN

STSSN Science Contributions

- Humerii and eyeballs are collected for aging studies – NMFS / SEFSC Beaufort
- DNA samples are collected for genetic and / or stable isotope studies – archived at NMFS / SWFSC
- Various samples are collected for specific research projects as requested, for example
 - Flippers collected for Kemp's ridley wire tagging project to determine time spent in pelagic life stage – NMFS / SEFSC Galveston
 - Stomach content analysis to evaluate shifts in diet – GA DNR
- Necropsies have contributed to increased understanding of marine turtle disease processes and environmental impacts
 - Fibropapilloma
 - Red tide
 - Domoic acid



STSSN Management Contributions

- Near real-time monitoring of strandings allows for rapid investigation of unusual stranding events to determine cause(s) and minimize impacts to populations.
- Measurements from stranded turtles were used to document that turtle excluder device (TED) openings were too small to release large turtles from shrimp trawls, resulting in revised regulations requiring larger TED openings.
- Stranding data are routinely used to help inform management decisions / actions.
 - Section 7 consultations
 - Section 10 consultations
 - Biological opinions

Strengths

- Collaborative effort between SEFSC, state agencies, other federal agencies, private organizations, and permitted individuals
- Long term monitoring program
 - 35 year dataset
 - Near real-time monitoring
- Standardized data collection
- Centralized database with standardized coding of forms useful for management purposes
- Rapid response capabilities for cold-stuns and other unusual stranding events



Cold-stun event

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Challenges

- Temporal and spatial variations in network coverage
- Inaccessibility of portions of coastline
- Sea turtle program lacks capacity for programmatic IT support for database improvement
- Increased stranding and incidental capture reports with static staffing levels; averages
 - 1980-1989 = 1735
 - 1990-1999 = 2711
 - 2000-2009 = 3661
 - 2010-2014 = 6763



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Future Directions

- Improve data flow process
- Improve STSSN database
 - User friendly data entry
 - Increase report options
- NE Region take on larger role to monitor strandings in that area
- Improve unusual stranding event response
- Increase training of state coordinators and network volunteers
- Increase sample collection / research projects, e.g. pollutants, diet analysis

